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(f) Sole Community Hospitals will be offered a one-time choice to elect payments as a regular prospective payment system hospital.

8. **Payment of West Virginia Health Care-Related Tax**: The standardized operating payment amounts are multiplied by 1.025 to adjust payment for West Virginia health care-related tax.

(a) The West Virginia health care-related tax is a Medicare allowable cost.

(b) The West Virginia health care-related tax was not included in the FY 1992 Medicare cost reports nor the 1992 HCCRA hospital billing data that were used to calculate the standardized operating payment amounts.

9. **Updating Beyond Rate Year 1996:** The peer group operating costs and the Sole Community Hospitals' own operating costs will be updated beyond rate year 1996 by the DRI/McGraw Hill PPS Hospital Index.

(a) For rate year 2000, the peer group operating costs and the SCH's own operating costs will be updated by the HCFA hospital market basket as reported in the Federal register offset based upon national productivity improvements as estimated by the Medicare Payment Advisory Commission. Beginning with rate year 2001, the Bureau will consider both national productivity improvement and West Virginia hospital productivity improvement and site of service change in determining the update. In addition, the Bureau may adjust the labor portion of the national market basket to reflect the West Virginia labor market as measured using ES 202 data.

E. **HOSPITAL ADJUSTMENTS TO STANDARDIZED OPERATING RATE PAYMENTS**: The prospective operating payments are adjusted at the point of discharge for wage differences and indirect medical education costs.

1. **Wage Difference Adjustment:** Adjustments are made to the labor-related portion of the operating payment amounts to reflect differences in wages across the state.

(a) Three rural markets and three urban labor markets have been defined based on counties with similar average hospital wages. Hospitals located in counties in each of these market areas will have the labor portion of the standardized payment amount adjusted by the wage index value that is assigned to their respective market area.

(b) Wage data were obtained from the HCFA Wage Index Computer File; Federal Register, Sept. 1, 1994, pp. 45937-46447, and represent fiscal year 1991 Medicare cost report filings.

(c) The six markets wage index values were developed as follows:

(i) This discharge-weighted average hourly wage of hospitals in each geographic area was calculated. This represents the numerator in the index value.

(ii) A statewide discharge-weighted average hourly wage of hospitals was calculated. This represents the denominator in the index value.

(iii) Each market area's average hourly wage was divided by the statewide average hourly wage to create the six wage index values. The six market areas and their index values are as follows:

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Area	Counties	Average Adjusted Hourly Wage	Wage Index Value
1.	McDowell, Logan, Mingo Boone, Wayne, Lincoln, Wyoming	$14.14	0.95766
2.	Cabell, Putnam, Kanawha, Fayette, Raleigh, Summers, Mercer, Monroe, Greenbrier	15.47	1.04742
3.	Wood, Mason	14.23	0.96342
4.	Jackson, Roane, Clay, Nicholas, Webster Pocahontas, Upshur, Barbour, Taylor	11.33	0.76728

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	Gilmer, Calhoun, Wirt, Ritchie, Doddridge, Tyler, Wetzel, Pleasants, Braxton		
5.	Randolph, Pendleton, Tucker, Hardy Grant, Preston, Mineral, Hampshire, Morgan, Berkeley, Jefferson	13.80	0.93463
6.	Lewis, Harrison, Marion, Monongalia Marshall, Ohio, Brooke, Hancock	14.86	1.00595
	Overall	14.77	1.00000

(d) The wage adjustment applies to only the labor-related portion of operating costs. The Bureau uses Medicare's determination that 71% of operating costs are labor-related and 29% of operating costs are nonlabor-related costs.

(i) The formula for calculating the market area geographic wage adjustments, which represents the weighting for labor and nonlabor related portions of operating costs, is as follows:

Geographic wage adjustment factor = (0.71 * wage index) + 0.29

(ii) The six index values are as follows:

Area	Counties	Geographic Wage Adjustment Factor
1.	McDowell, Logan, Mingo Boone, Wayne Lincoln, Wyoming	0.970
2.	Cabell, Putnam Kanawha, Fayette, Raleigh Summers, Mercer, Monroe, Greenbrier	1.034
3.	Wood, Mason	0.974
4.	Jackson, Roane, Clay, Nicholas Webster, Pocahontas, Upshur Barbour, Taylor, Gilmer Calhoun, Wirt, Ritchie, Doddridge Tyler, Wetzel, Pleasants, Braxton	0.835
5.	Randolph, Pendleton, Tucker, Hardy	0.954

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Grant, Preston, Mineral, Hampshire
Morgan, Berkeley, Jefferson

6. Lewis, Harrison, Marion, Monongalia 1.004
Marshall, Ohio, Brooke, Hancock

(e) The Bureau will evaluate the need to update the geographic wage adjustment factor on an annual basis using the most recent wage data as reported by HCFA in its Wage Index Computer File and as published in the Federal Register.

2. **Indirect Medical Education Adjustment:** An adjustment is made to the operating portion of the standardized payment amount to teaching hospitals to cover the indirect costs associated with training physicians.

(a) The IME teaching add-on is applied to the sum of the basic DRG payment and outlier payment amounts for the case.

(b) The IME adjustment was obtained from a regression equation which explains how allowable costs per case vary by teaching intensity, measured as the log of [1 + residents/(average daily census)], among other factors. Teaching intensity was found to have a significant, positive influence on allowable costs per case compared to nonteaching hospitals.

(c) The exponential coefficient on the teaching intensity variable (0.319) is applied to one plus the ratio of interns and residents to average daily census to yield the multiplicative IME payment adjustment. For each teaching hospital, its own 1994 FTE intern-resident to average daily census ratio is the basis for the IME adjustment factor. The IME adjustment is based upon the following formula:

$$[1 + \text{interns and residents/(average daily census)}]^{0.319}$$

(d) **Establishment of Maximum Allowable Number of Specialist Residents:** The Bureau established a maximum allowable number of residency positions for specialists in each teaching hospital.

(i) The Bureau established that only three-quarters of the nonprimary care residents in teaching institutions would be eligible for coverage.
(ii) Each teaching hospital's number of FTEs in specialty training programs was capped at 75% and the number of interns residents per teaching hospital recalculated to reflect the cap.
(iii) All primary care residents are eligible for full payment coverage.

(e) **Establishment of Minimum Occupancy Rate:** The Bureau established a minimum hospital occupancy rate that would be reflected in each teaching hospital's average daily census.
(i) The Bureau established that each hospital must meet a minimum 75% occupancy rate.

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(ii) Each teaching hospital that had a occupancy rate of less than 75% had its average daily census set equal to a value that would achieve the occupancy rate minimum of 75%.

(f) **Rate Year 1996 Indirect Medical Education Adjustments Factors:** The Bureau has established the following IME adjustment factors for rate year 1996:

Hospital	IME Factor
West Virginia University Hospital	1.198
Greenbrier Valley	1.008
United Hospital Center	1.023
St. Mary's Hospital	1.017
Charleston Area Medical Center	1.052
Monongalia General	1.003
Ohio Valley Medical Center	1.054
Logan General	1.015
Wheeling Hospital	1.022
Cabell Huntington	1.047

(g) The Bureau will evaluate the need to update the indirect medical education adjustment factor on an annual basis using the most currently available data from the Medicare cost reports.

F. **METHODS USED FOR PAYMENT FOR HIGH COST CASES:** The Bureau will make an additional payment to the DRG payment rate in certain instances where cases are found to be extremely resource intensive.

1. **Definition of High Cost Case:** A discharge qualifies as a cost outlier and the hospital will receive additional payment if the adjusted operating cost for a case exceeds the DRG payment rate plus a fixed dollar amount, or deductible. The sum of the DRG payment and the fixed dollar deductible is called the outlier threshold.

(a) No additional outlier payments will be made for high cost capital cases.
(b) No additional outlier payments will be made for cases that have long lengths of stay unless they meet the criteria as specified in Section F5.

2. **Establishment of Level of Risk Sharing:** The Bureau has determined the following:

(a) The outlier payments will be self-financing through a uniform reduction in the standardized operating amounts for each peer group and through a DRG-specific reduction in the DRG weights. The outlier payment for high cost cases is 4% for the 1996 rate year. This 4% (as in the Medicare program) is a target dollar amount, rather than a limiting amount. No pre-set dollar limits are applied and, during any rate year, total outlier payments may exceed the target outlier payment.

(b) The Bureau has established the outlier pool at 4% for rate year 1996.

(c) The Bureau has established the outlier payment portion as 80 percent of estimated operating costs above the fixed loss threshold.

3. **Establishment of the Fixed Dollar Deductible:** The high cost outlier fixed loss deductible is determined by the size of the outlier pool. For rate year 1996, the Bureau has established an outlier pool of 4 percent of total hospital

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payments and will pay 80% of estimated costs above the threshold to hospitals.

(a) The high cost outlier threshold was determined using the following iterative process:

(i) establishing a preliminary threshold;
(ii) calculating total outlier payments;
(iii) estimating the size of the outlier pool as a percentage of total PPS payments;
(iv) adjusting the DRG weights and standardized operating payment amounts to maintain budget neutrality within PPS; and
(v) adjusting the thresholds until a 4% outlier pool was obtained.

(b) Calculation of the high cost outlier payments were determined by comparing the standardized estimated costs of a case to the outlier threshold and multiplying the differential by 80 percent.

(c) The cost of a case was determined by multiplying submitted charges on each 1992 HCCRA Medicaid hospital bill by the appropriate operating cost-to-charge ratio, adjusted for indirect medical education costs. The IME adjustment is made because no IME add-on is applied to DRG payments for purposes of calculating the size of outlier payments.

(d) The DRG-specific adjustment to the DRG weights used the following methodology:

(i) Each DRG weight is reduced by the proportion of outlier to total PPS payments expected to be made to patients in the DRG.

(ii) All debited weights are normalized by a new average case-mix index value calculated using the methodology specified in Section C3 and the debited weights calculated in Section F3.

(e) The standardized operating amounts were reduced by 4%.

(f) For rate year 1996, the fixed dollar deductible has been set at $11,040.

4. **Establishment of High Cost Outlier Threshold:** The high cost outlier threshold is the determined for each DRG and each hospital as follows:

(a) For hospitals that are not Medicare designated Sole Community Hospitals, the hospital's peer group standardized operating payment is multiplied by the appropriate geographic wage adjustment factor to yield a wage-adjusted standardized operating amount.

(b) For hospitals that are Medicare designated Sole Community Hospitals, a wage-adjusted standardized operating amount is calculated using the following three steps:

(i) The hospital's peer group standardized operating payment is multiplied by the appropriate geographic wage adjustment factor and by 0.50.

(ii) The hospital's own standardized operating costs is multiplied by the appropriate geographic wage adjustment factor and by 0.50.

(iii) The two products are summed.

(c) The wage-adjusted standardized operating amounts are multiplied by the DRG weights to yield a wage-adjusted DRG operating payment amount.

(d) Hospital-specific deductibles are calculated by multiplying the fixed dollar threshold by each hospital's geographic wage adjustment factor.

(e) The DRG-specific outlier thresholds are determined for each hospital by adding the wage-adjusted DRG operating payment amount to the hospital-specific fixed dollar deductible.

5. **Identification of High Cost Cases:** Cases with extraordinary costs are determined by comparing estimated costs to a fixed-dollar outlier threshold for the DRG to which the case has been assigned using the following methodology:

(a) All charges for non-covered services as well as charges for all services that should be billed separately on a HCFA-1500 are subtracted from the submitted charges.

(b) The adjusted charge is multiplied by the hospital's operating cost-to-charge ratio, adjusted by the geographic wage adjustment factor, to obtain an estimated operating cost.

(c) The estimated operating cost for the case is compared with the outlier threshold for the DRG to which the case has been assigned.

(d) If the estimated cost exceeds the outlier threshold value, then the case qualifies for high cost outlier payments.

6. **Calculation of Outlier Payment:** The additional outlier payment is calculated as follows:

(a) The operating costs eligible for outlier payments are determined by subtracting the outlier threshold from the adjusted operating cost as specified in F5(b).

(b) The amount calculated in F6(a) is multiplied by the marginal cost factor of 0.80.

(c) The outlier payment is adjusted for indirect medical education by multiplying the amount determined in F6(b) by each hospital's respective indirect medical education adjustment factor.

(d) The total outlier payment amount determined in F6(c) is multiplied by 1.025 to adjust payment for the W. Virginia health care related provider tax.

7. **Updating the High Cost Outlier Threshold:** The Bureau will update the high cost outlier threshold annually to produce an expected 4% outlier payment pool. The Bureau will use the methodology as specified in Section F4 using the most available discharge data.

G. **METHODS USED TO ESTABLISH PROSPECTIVE CAPITAL PAYMENT RATES:** Capital costs will be reimbursed on

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a prospective per case basis which is determined by multiplying standardized capital payment amounts and the DRG weights. The 1996 standardized capital payment is a blend between a 1992 peer group amount and the hospital's own 1994 capital costs per discharge; all costs updated through the rate year 1996 using ProPAC's update methodology.

1. **Basis of the Standardized Capital Payment Amounts:** Capital represents a provider's stock of physical assets; the buildings, plant, land, and equipment.

   (a) Medicare principles were used to identify capital costs eligible for reimbursement. These costs include the following:

      (i) straight-line depreciation over the useful life of the asset;

      (ii) interest expenses related to patient care;

      (iii) leases and rental expenses;

      (iv) land and medical equipment that are allowable under Medicare cost reimbursement principles; and

      (v) other capital expenses, including but not limited to asset insurance, costs of minor equipment, taxes on land and depreciable assets, and capital costs of related organizations.

   (b) Fiscal year 1991 Medicare Cost Report and 1992 HCCRA hospital billing data for Medicaid discharges formed the basis for determining 1992 capital costs.

   (c) Fiscal year 1994 Medicare Cost Report and 1994 Medicaid hospital billing data formed the basis for determining 1994 capital costs.

   (d) A 1992 estimated capital cost for each Medicaid discharge was produced using 1992 Medicaid claims with their bed accommodation and ancillary department charges against per diems and cost-to-charge ratios calculated from the 1991 Medicare cost report. The following methodology was used:

      (i) Indirect capital costs were stepped down to bed accommodations and ancillary departments, where they were added to directly assigned capital costs.

      (ii) Capital cost per diems were calculated for the five nursing departments.

      (iii) Capital cost-to-charge ratios were calculated for the same 12 ancillary departments used to derive operating costs.

      (iv) To determine ancillary costs, ancillary charges on the 1992 billing data were multiplied by their respective capital cost-to-charge ratios.

      (v) To determine bed accommodation costs, bed accommodation lengths of stay were multiplied by their respective capital cost per diems.

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(vi) The sum of F2(d)(iv) and F2(d)(v) produced a capital cost for each claim.

2. **Hospital-Specific Adjustments to Costs:** An adjustment was made to the estimated capital costs to remove the effect of case mix prior to calculation of the average standardized capital cost per discharge within each peer group.

(a) **Case Mix Adjustment:** The hospital's average capital cost per case is standardized to account for case mix by dividing the hospital's average capital cost per case by its case mix index as determined in Section C3.

(b) An overall average hospital capital cost per case was generated aggregating across all Medicaid patients.

3. **Establishing 1996 Capital Cost Peer Groups**

(a) An ordinary least squares regression was estimated on the average capital cost per case per hospital as derived in Section G2. The market geographic cost index, bed size, dummy variables for major vs. minor teaching status (defined as residents per average daily census greater than .2 or greater than 0) vs. Nonteaching (=0), disproportionate share percentage, and dummies for large vs. small urban cities were used as explanatory variables.

(b) Based on the regressions, it was concluded that capital costs per patient did not vary by hospital labor market wage differences, bed size or disproportionate share status, once costs were standardized for case mix, nor did they vary between rural and urban hospitals after adjusting for case mix. However, capital costs did vary by urban location and teaching status.

(c) Based on these findings, the Bureau decided to create three peer groups for capital costs:

(i) Major teaching peer group;
(ii) Large urban, nonmajor teaching peer group; and
(iii) All-other peer group.

4. **Establishing Maximum Capital Cost Thresholds:** The Bureau established maximum 1992 average capital costs per discharge thresholds for each peer group of hospitals and maximum 1994 average capital costs per discharge thresholds for each hospital's own costs using the following methodology:

(a) 1992 and 1994 average standardized capital costs per case were estimated for each hospital.

(b) Within each peer group, hospitals were arrayed from highest to lowest 1992 average standardized capital cost per case.

(c) The 80th percentile hospital's 1992 average standardized capital cost per case was used as the threshold for the two nonmajor teaching peer groups.

(i) The 1992 threshold for the large urban, nonmajor teaching peer group was established at $485.

(ii) The 1992 threshold for the all-other peer group was established at $277.

(iii) The 1992 threshold for the combined nonmajor teaching peer groups was established at $321.

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(d) For the major teaching peer group, which only contains four hospitals, the 80th percentile average capital cost per case was imputed.

(i) The 1992 threshold for the major teaching peer group was established at $438.

(e) The average cost of hospitals exceeding these thresholds were capped at the threshold and the three 1992 peer group averages calculated.

(f) To establish the 1994 thresholds within each peer group, hospitals were arrayed from highest to lowest 1994 average standardized capital cost per case.

(g) The 80th percentile hospital's 1994 average standardized capital cost per case was used as the threshold in each peer group.

(i) The 1994 threshold for the major teaching peer group was established at $360.

(ii) The 1994 threshold for the large urban, nonmajor teaching peer group was established at $325.

(iii) The 1994 threshold for the all-other peer group was established at $207.

(iv) Sole Community Hospitals' own 1994 capital costs were not subject to the 80th percentile threshold provision.

(v) 1994 thresholds were below 1992 thresholds due to declining average capital costs for the majority of hospitals.

(h) The average costs of hospitals exceeding these thresholds were capped at the threshold.

5. **Calculation of the 1992 Peer Group Average Standardized Capital Cost Per Case:**

(a) 1992 capital costs per discharge were calculated for three peer groups:

(i) The first peer group includes 4 major teaching hospitals, defined as those with intern -resident to average daily census ratio greater than 0.20.

(ii) The second peer group includes hospitals located in the three large urban counties of Kanawha, Putnam and Cabell, excluding major teaching hospitals.

(iii) The third peer group consists of all remaining hospitals.

(b) Within each peer group, an overall average standardized capital cost was determined by:

(i) multiplying each hospital's average standardized capital cost by its number of discharges;

(ii) summing across all hospitals within the peer group; and

(iii) dividing through by the total number of discharges across all hospitals within the peer group.